

# ***NATIONAL AIR TOXICS TRENDS STATIONS QUALITY ASSURANCE SYSTEM***

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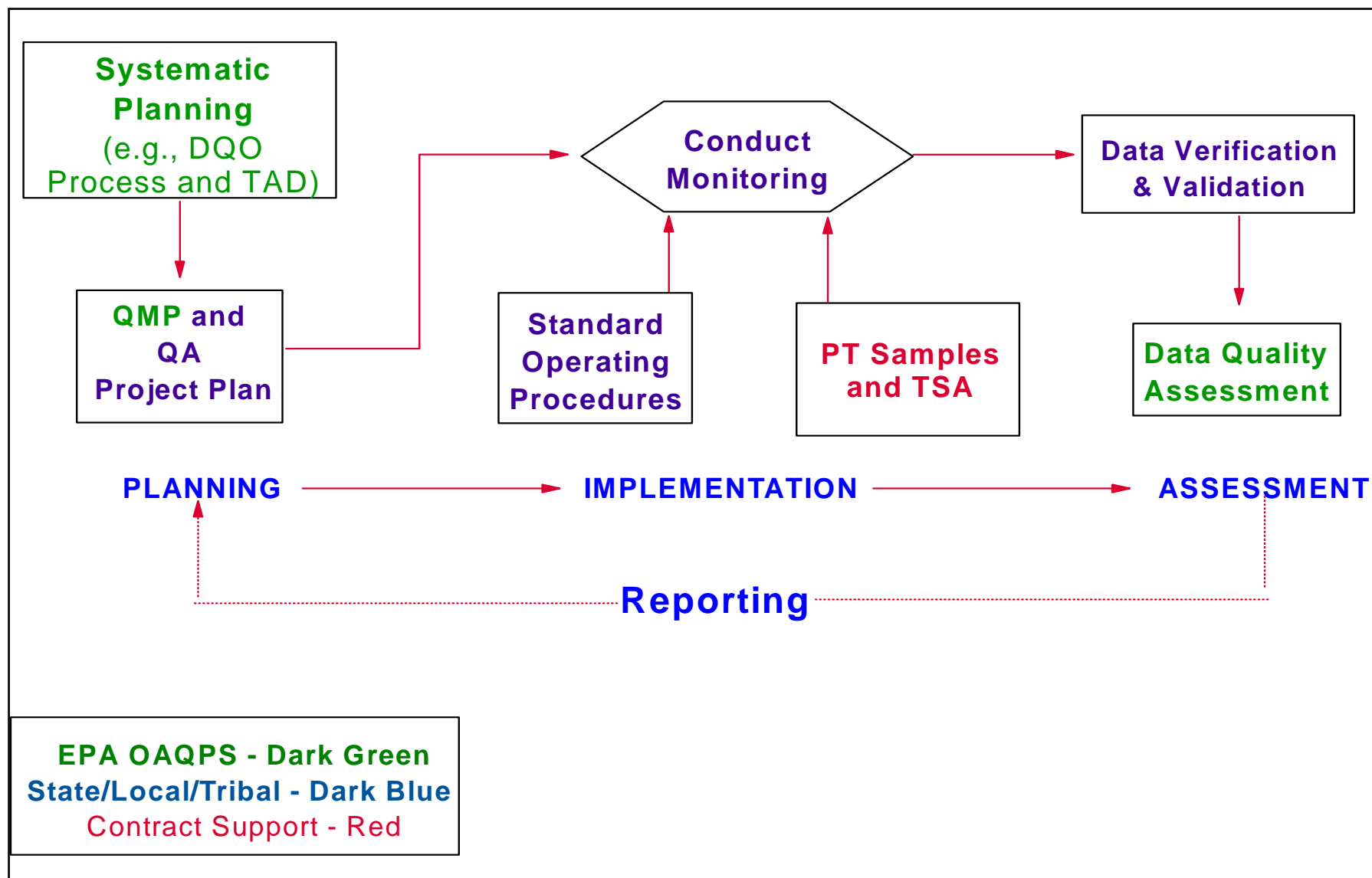


# Outline

- NATTS QA system
  - What is it?
  - Where are we?
  - Issues!
- Results from Proficiency Tests 2001-2003
- Summary



# NATTS QA System







# QA System Planning

- DQOs: developed 2002 by Battelle Inc.
- QMP – under development
- QAPPs – updates due 9/05
- Technical Assistance Document (TAD): developed by Eastern Research Group (Draft) on AMTIC Website





# QA System Implementation

- Proficiency Testing (PT): Quarterly spiked samples to all labs to estimate bias (Mantech Inc.).
  - Will include metals, VOCs and carbonyls
  - First samples out soon!
- Technical System Audits (TSAs): 11 TSAs per year (Battelle Inc.)
  - First TSA to be performed in Philadelphia 4/20/04!
- Cylinder Certifications (EPA ORIA Lab –LV):
  - certify one calibration level cylinder to be sent to 18 NATTS Labs





## QA Systems Assessment

- Annual QA Report: Summarize Precision, Bias, TSA data
- Data Quality Assessments: Summarize whether Precision and Bias goals are met





# QA Systems Issues

- NIST:
  - Upfront Development
  - Cost
- TAD Development
- Use of Section 105 funding





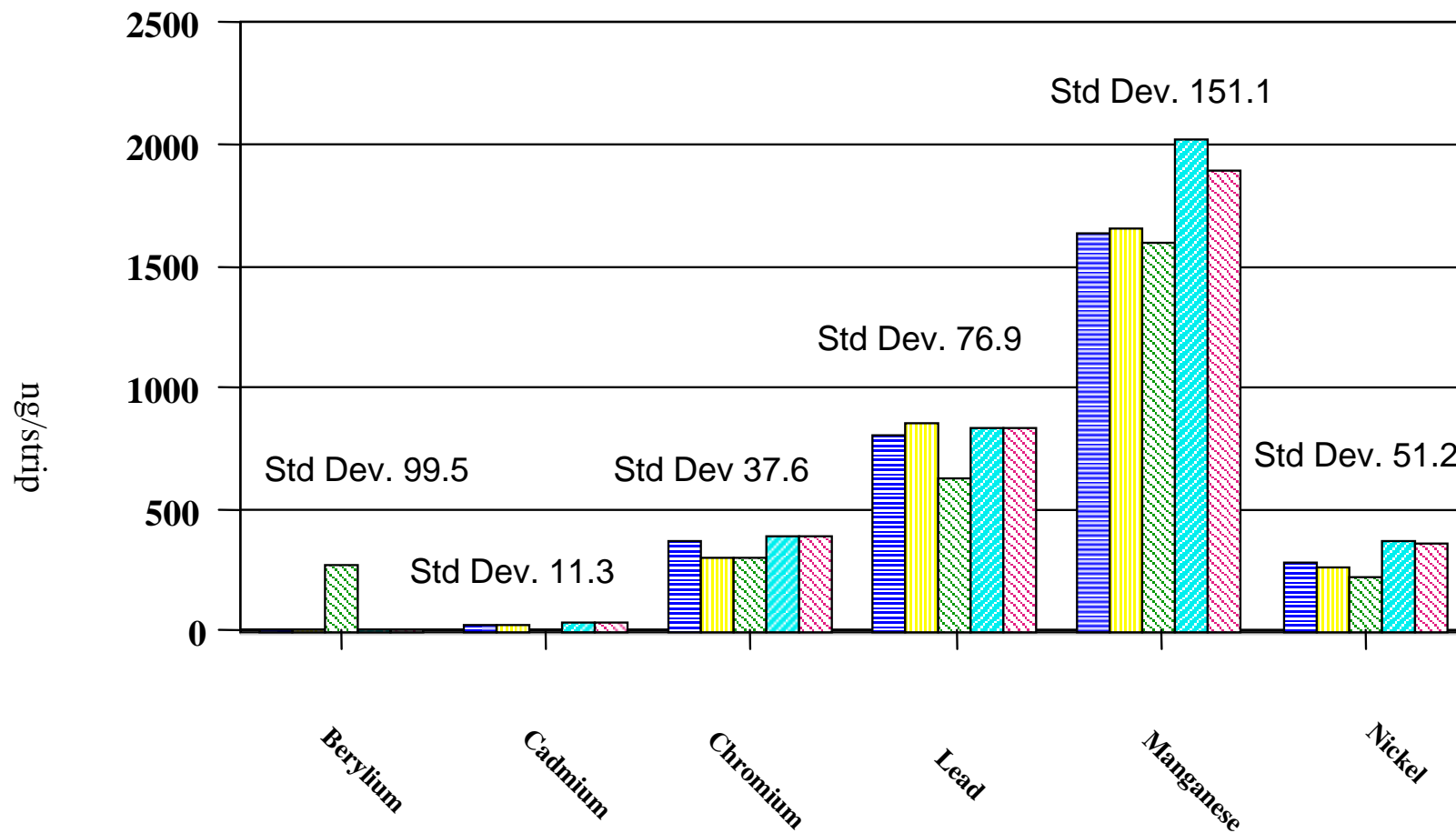
# Proficiency Testing

## ■ To date:

- Pilot study/EPA: 2001 metals
  - Only performed during Pilot study
  - Whole air PM10 samples – 8 x 10 in quartz filter
  
- Pilot study/CARB: 2001 to 2003
  - “Whole Air” samples – VOCs
  - Pilot labs continued analysis
  
- Region 4 PT results



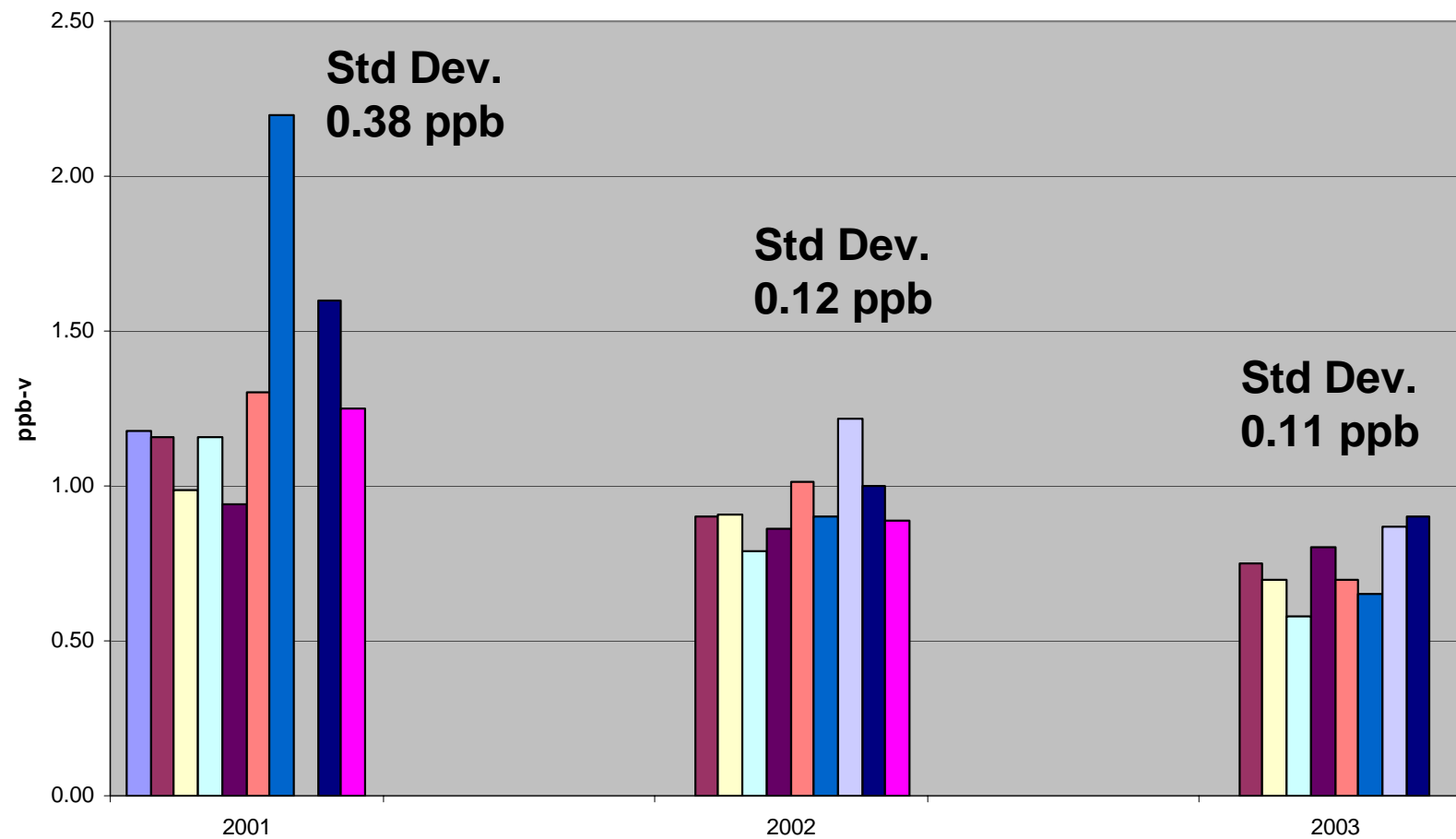
## Metals Intercomparison - 2001



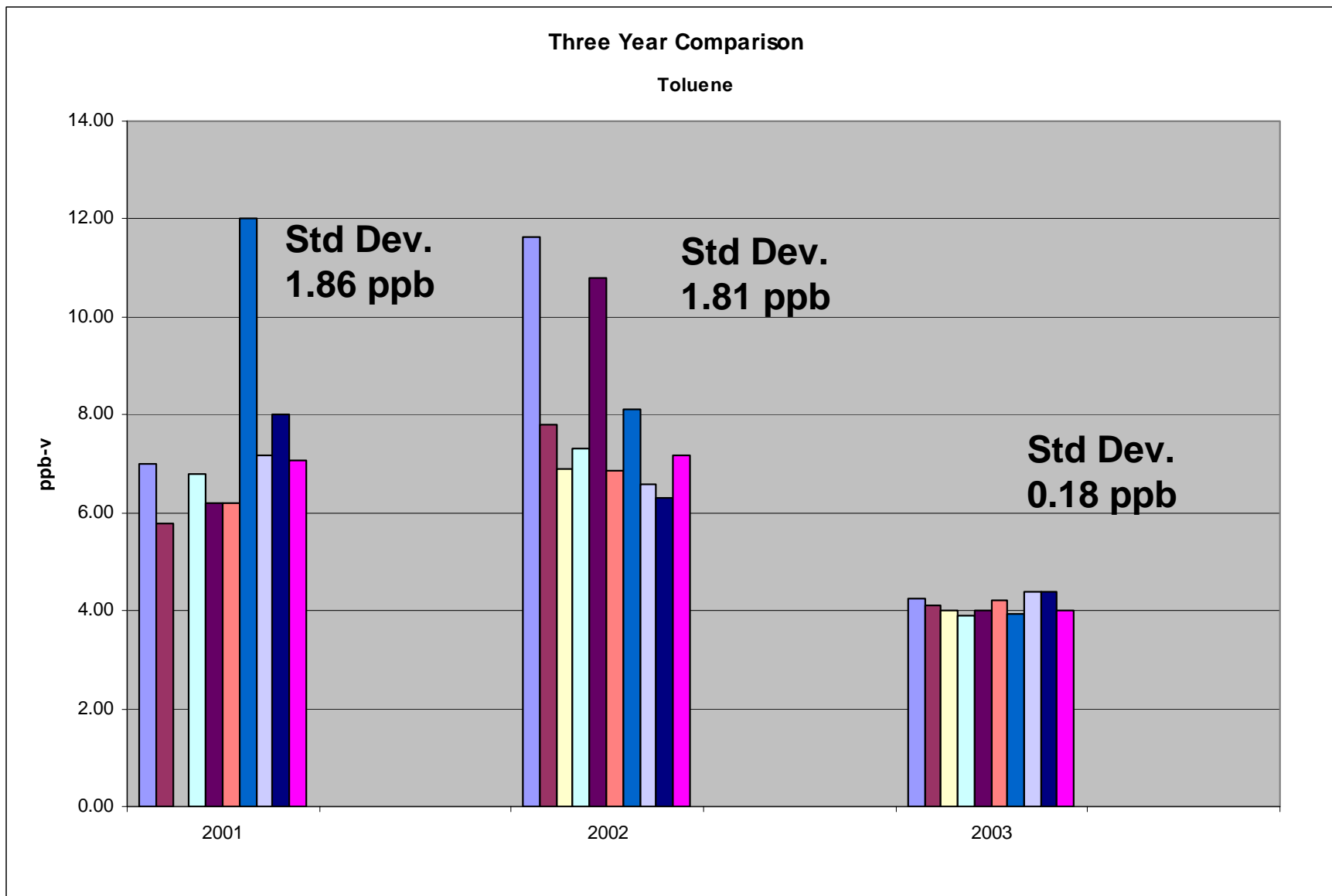


Three year Comparison

Dichloromethane

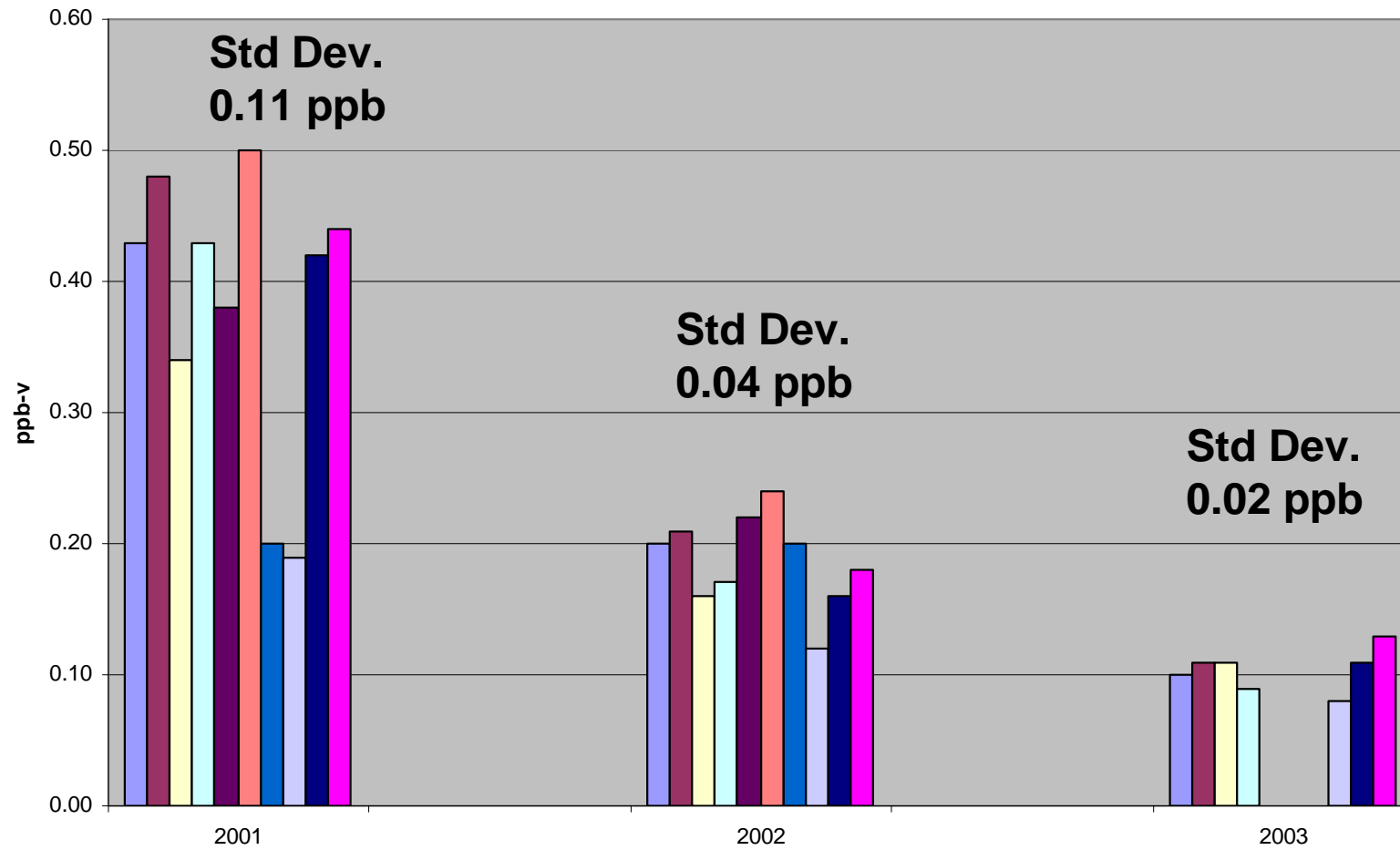








Three Year Comparison  
PERC

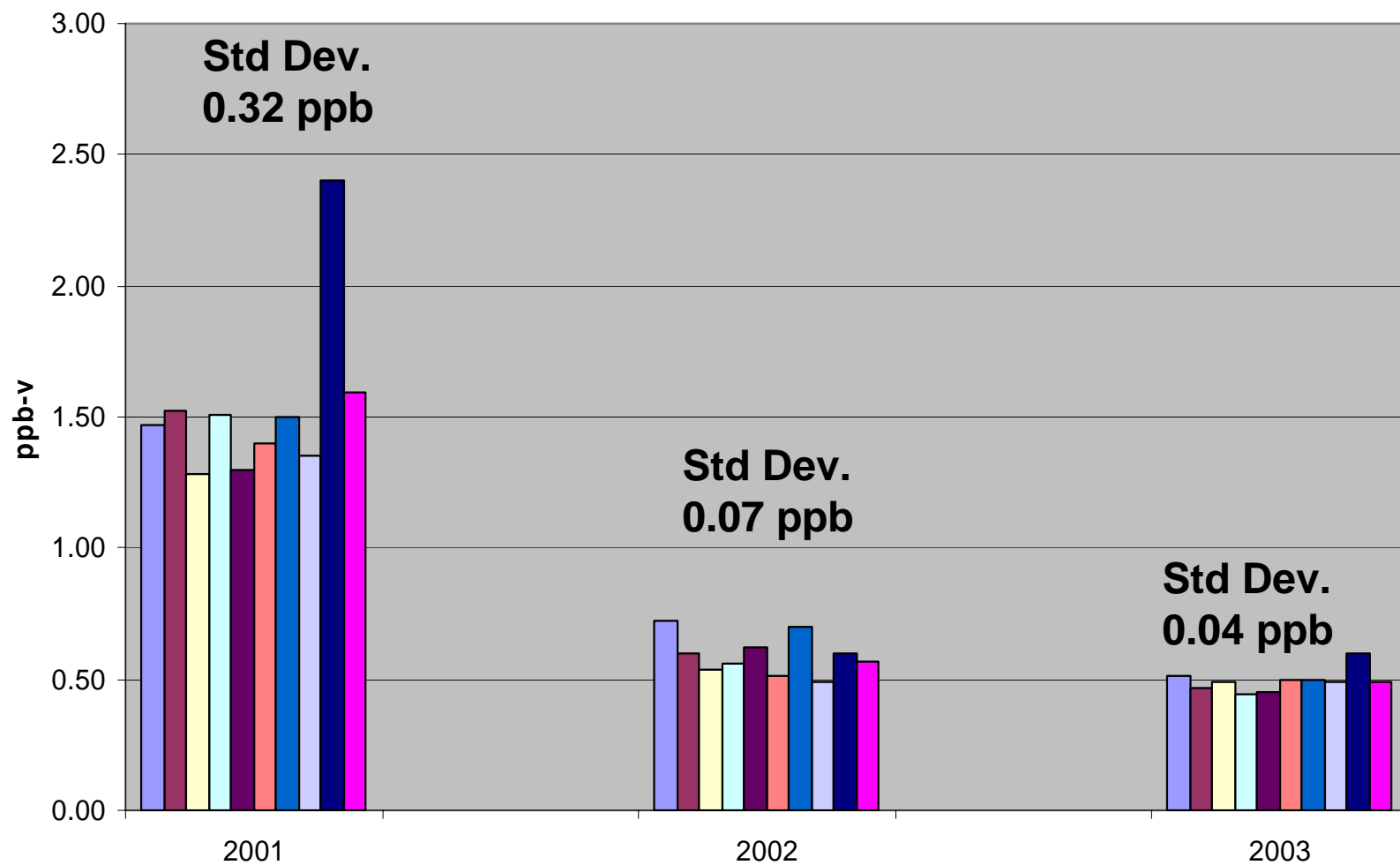






## Three Year Comparison

### Benzene

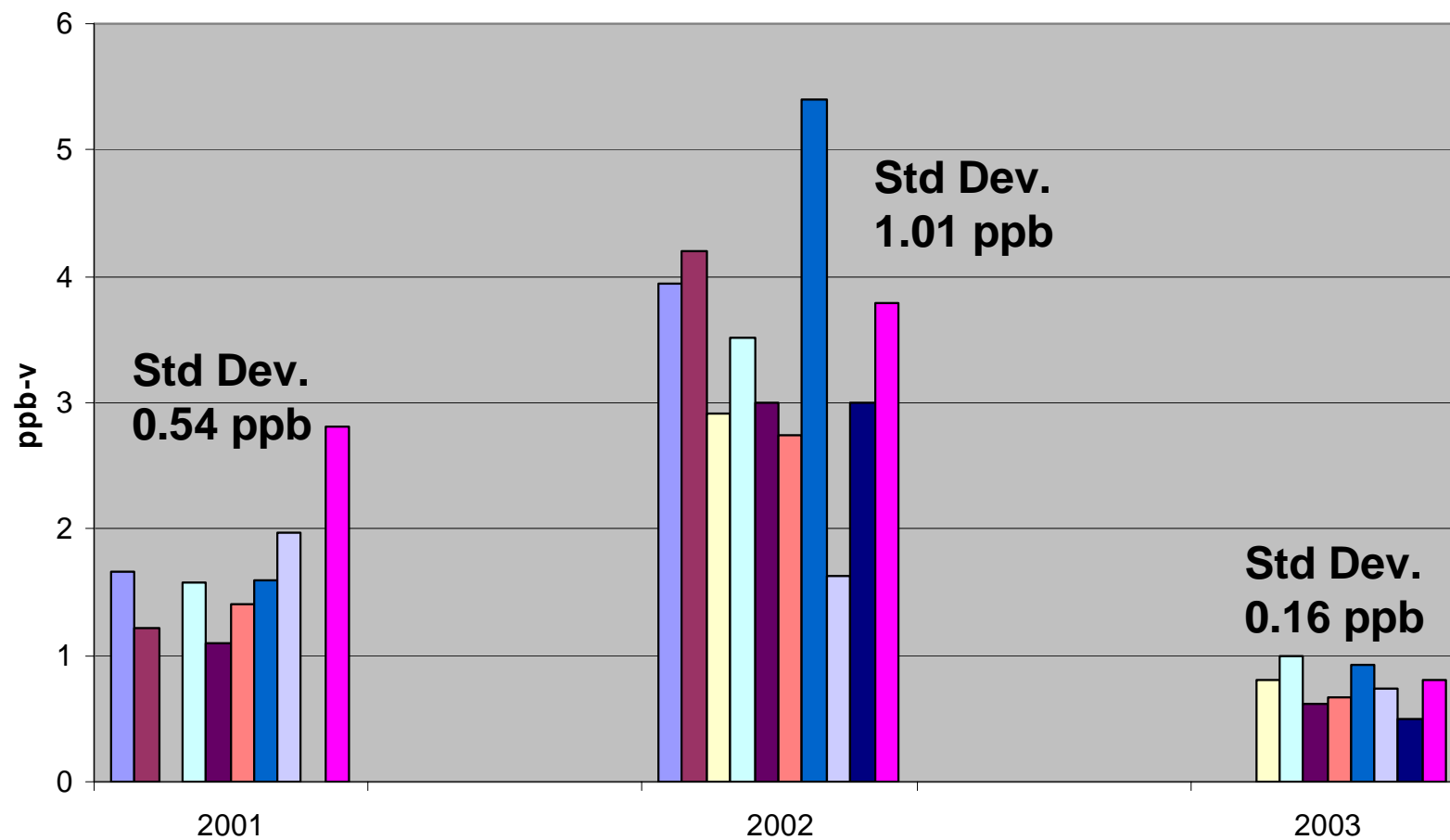






## Three Year Comparison

m/p xylene

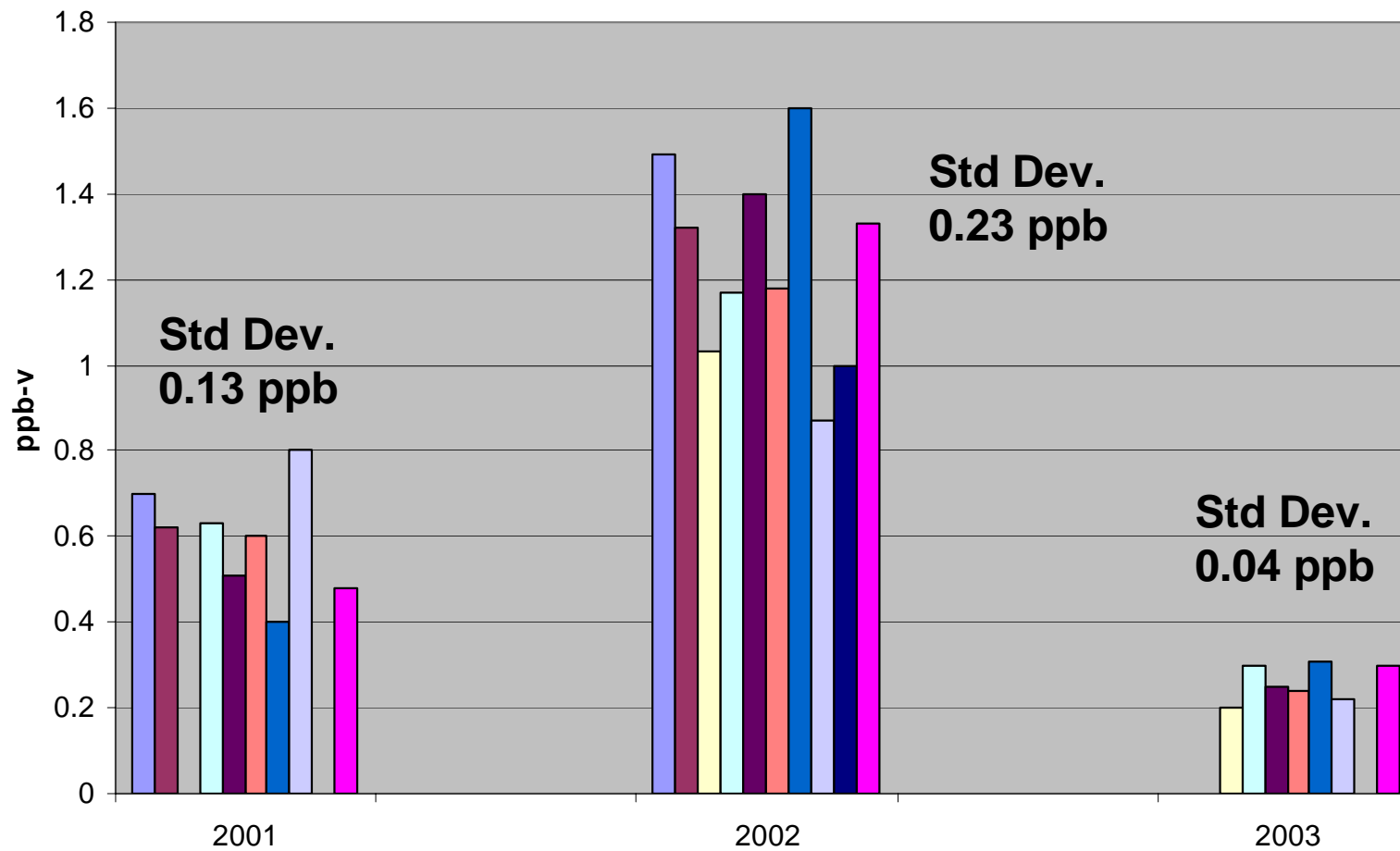






## Three Year Comparison

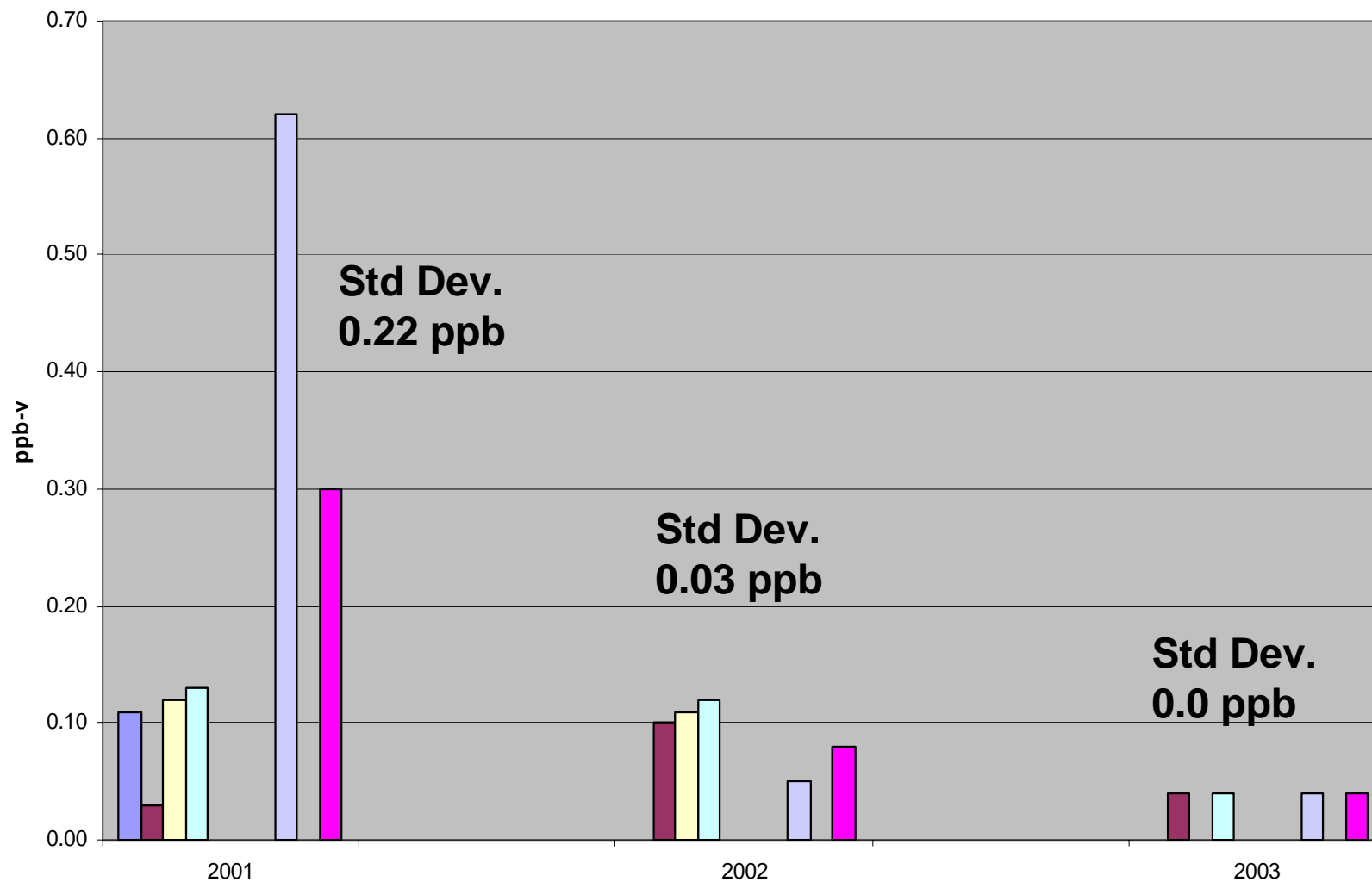
### Ethylbenzene





### Three Year Comparison

1,3 butadiene







# Summary

- AT QA System is underway!
- On-going PT and TSA
- Whole Air VOCs
  - Extremely useful tool
  - Illustrates problems with “whole air samples”
  - Need referee lab